

SECTION IX

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CANADIAN PATENT APPLICATION NO. 2,256,944

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ABSTRACT

A new improved recreational vehicle is provided. The vehicle is adapted for use as a snowmobile or an all-terrain vehicle. A typical unibody tunnel type snowmobile chassis is reinforced by pyramidal upper support frame members to withstand the rigors of all-terrain use. Furthermore, the vehicle is shorter than a typical snowmobile in order to position the driver and engine closer to the midpoint of the vehicle, which is necessary for all terrain vehicle manoeuvrability and control. The rear suspension has a unique system of linkages which make it suitable for chain drive and wheels or a snowmobile track and track rail.

IMPROVED VEHICLE

Field of the Invention

This invention relates to recreational vehicles and more particularly to a snowmobile which is easily convertible to an all terrain vehicle which again can be convertible back to a snowmobile.

Background

Amateurs of recreational vehicles spend time on their vehicles in both winter and summer. In winter a snowmobile having a track and pair of skis is generally used and in the summer the same enthusiasts switch to an all terrain vehicle which is capable of going over rough terrain in forests and the like. In recent years the cost of snowmobiles and all terrain vehicles has risen dramatically as such vehicles improve in terms of style, power and reliability. Furthermore, the vehicles themselves are larger. Storage space being a factor, many enthusiasts are not only unable to afford two vehicles but simply do not have the space to store one of the vehicles in the off season. With these things in mind, the present inventors sought to produce an improved vehicle which was manoeuvrable on both snow and bare land through a simple conversion.

Unfortunately, a typical snowmobile unibody frame or chassis is not strong enough to withstand the rough use which an all terrain vehicle must endure. Furthermore, an all terrain vehicle chassis or frame does not have the tunnel formation necessary to convert it to a snowmobile. In addition, the positions of the engine and driver in a typical snowmobile is forwardly and rearwardly respectively.

However, in an all terrain vehicle the driver's center of gravity must be between the front and rear axles otherwise poor handling and poor maneuverability occurs.

SUMMARY OF THE INVENTION

The inventors of the present invention thereby set out to construct a vehicle which incorporated a frame, a seat position, and a front and rear suspension suitable for both a snowmobile and an all terrain vehicle.

Unanticipated by the inventors, their snowmobile which is shortened so that the rider sits forwardly and the engine is moved rearwardly turned out to have high maneuverability and was just as stable or more so than the prior art type snowmobiles. Therefore, this invention seeks to provide an improved recreational vehicle adapted for use on snow or bare ground; said vehicle being shorter in length than a prior art snowmobile; said vehicle being constructed such that an operator is positioned forwardly, and an engine is placed rearwardly such that in operation, said engine and said operator are located close to the midpoint of the vehicle. This invention further seeks to provide a vehicle including a unibody rear chassis and an upper support structure, said rear chassis including a tunnel adapted to permit a chain drive or track move therethrough; said upper support structure including a plurality of frame members thereby providing additional strength to the vehicle for all terrain use.

Another embodiment of the invention is a new stabilizer bar arrangement on the front suspension whereby the stabilizer bar runs through, on each end, a plastic block or stabilizer block. The block not only pivots but moves

inwardly and outwardly such that if one ski rises the other will rise also.

The present invention uses a new unitary front sub-frame assembly which is attached to the main frame and which basically houses the front suspension components. The rear of the main frame is the standard unibody frame with a tunnel therein which permits the mounting of either a chain drive or track.

The sub-frame and rear unibody tunnel-type frame are connected together with various stabilizer bars and lateral supports to produce a very solid frame capable of the abuse of all terrain driving.

Because the snowmobile body is shortened considerably, a snow flap is necessary to cover the rear part of the track. This snow flap is capable of substantial movement depending upon the compressed or extended state of the rear suspension.

The vehicle also uses a new type of cradle arrangement as an engine mount. The engine can be affixed to the engine mount out of the vehicle and then during assembly the entire engine and engine mount are manoeuvred into the frame and secured thereto.

The vehicle also has another feature. When using the vehicle as an all terrain vehicle only one seat is provided and the portion of the body behind the seat normally present during snowmobile use is removed and a mud guard-type fender installed in its place. Also capable of being installed in the place of the rear portion of the snowmobile body is a second seat which permits the addition of another rider.

The improved vehicle also has a track and rear suspension with more vertical play. This allows for the required vertical compression and extension for an all terrain vehicle rear suspension.

Another improvement is the addition of a chain drive to act as a braking system for the all terrain vehicle, since normally in a snowmobile the braking system is arranged on the track.

Brief Description of the Drawings

The invention will be more fully described in conjunction with the following drawings wherein:

Fig. 1 is a schematic side view of a driver operating a prior art snowmobile in a normal seated position;

Fig. 2 is a schematic side view of a driver operating a prior art snowmobile in a forward leaning racing position;

Fig. 3 is a schematic side view of a driver operating a prior art all terrain vehicle in a normal seated position;

Fig. 4 is a schematic side view of a driver operating a motorcycle in a normal seated position;

Fig. 5 is a schematic side view of a driver operating a snowmobile of the present invention in a normal seated position.

Fig. 6 is a schematic side view comparing a driver's position on a prior art all terrain vehicle and a driver's position on a snowmobile of the present invention;

Fig. 7 is a schematic side view comparing a driver's position on a prior art motorcycle and a driver's position on a snowmobile of the present invention;

Fig. 8 is a schematic side view comparing a driver's position on a prior art Harley Davidson Cruiser with a driver's position on the snowmobile of the present invention.

Fig. 9 is a schematic side view comparing a driver's position on a prior art snowmobile and a driver's position on the snowmobile of the present invention;

Fig. 10 is a schematic side view of a driver sitting on a snowmobile of the present invention;

Fig. 11 is a perspective view of the unibody frame of the present invention;

Fig. 12 is another perspective view of the unibody frame of the present invention;

Fig. 13 is a perspective view of the unibody frame of the present invention with additional structural supports;

Fig. 14 is a perspective view of ski leg of the present invention;

Fig. 15 is various views of a lower front support arm;

Fig. 16 is a partial view of the frame of the present invention and part of the left front suspension;

Fig. 17 is a perspective view of parts of the front suspension;

Fig. 18 is a perspective view of the sub-frame of the front

suspension;

Fig. 19 is a perspective view of the front suspension of the present

invention;

Fig. 20 is a perspective side view of partially completed vehicle of the

present invention;

Fig. 21 is a perspective front view of a partially completed vehicle of

the present invention;

Fig. 22 is a front view of a partially completed vehicle of the present

invention;

Fig. 23a is a schematic side view of the basic components of the rear

suspension of the present invention in a compressed state;

Fig. 23b is a schematic side view of the basic components of the rear

suspension of the present invention in a relaxed or extended state;

Fig. 24a is a schematic side view of the rear suspension (in a

compressed state) for use when it is equipped with wheels;

Fig. 24b is a schematic side view of the rear suspension (in an

extended state) for use when it is equipped with wheels;

Fig. 25a is a schematic side view of the basic components of the rear

suspension in a compressed state for use when it is equipped with a track;

Fig. 25b is a schematic side view of the basic components of the rear

suspension in an extended state for use when it is equipped with a track;

Fig. 26a is a schematic side view of the components of the rear

suspension in a compressed state when it is equipped with a track rail;

Fig. 26b is a schematic side view of the components of the rear suspension in an extended state when it is equipped with a track rail;

Fig. 27 is a schematic side view showing rear suspension movement between an extended state and a compressed state;

Fig. 28 shows a rear passenger seat and a rear end body portion in perspective view; and

Fig. 29, 30, 31, and 32 are various copies of photographs of the all terrain vehicle and snowmobile of the present invention.

Detailed Description of the Invention

In Fig. 1, one notes a man sitting to the rear of the seat in the dark outline shown as (A). He is seated on a prior art snowmobile. One notices the weight of the rider is over the rear section of the track. The motor (not shown) is located over the skis.

In Fig. 2, the operator is leaning forward in a racing position as shown in outline (B). Thus, the weight of the driver is slightly forward which is more useful in doing tight turns and other manoeuvres.

In Fig. 3, a driver is shown on a prior art all terrain vehicle (2). His body position is in outline marked (C). The driver is considerably further ahead on the vehicle than prior art snowmobiles. Thus, his center of gravity is closer to the midpoint between the wheels.

In Fig. 4, a driver is shown in outline (D) sitting on a standard motorcycle marked (3). The driver is even further forward with regard to the

center of gravity of the vehicle.

In Fig. 5, a driver is shown in outline (E) as seated upon the snowmobile of the present invention shown as (4). The driver is seated considerably ahead of a driver's position on a normal snowmobile and closer to the midpoint of the vehicle.

In Fig. 6 the outline of the snowmobile of the present invention is in dotted lines and shown as (4). This is compared to a standard all terrain vehicle (2) which is shown in solid lines. The driver's position (E) on the snowmobile of the present invention and (C) on an all terrain vehicle of the prior art type are almost identical. Thus, in the snowmobile of the present invention, the driver is seated approximately in the same position as on a normal all terrain vehicle.

In Fig. 7, a standard prior art motorcycle is shown in solid lines (3) and the driver position as marked as (D). The snowmobile of the present invention is in dotted lines marked as (4) and the driver's position is (E). Thus, the driver's position is somewhat rearwardly of a normal driver's position on a motorcycle.

Fig. 8 shows a driver in a position (A) in dotted lines on a prior art snowmobile (1) outlined in dotted lines. This is compared to a driver's position (F) on a prior art stretch motorcycle (5).

Fig. 9 compares a prior art snowmobile in solid lines marked as 1 with a snowmobile of the present invention in dotted lines marked (4). The driver (A), in solid lines, is sitting on the prior art snowmobile (1) and the driver (E) in dotted lines seated on the snowmobile of the present invention (4). One notes a

significant difference in the positions of the two drivers. Driver (E) is much further ahead and closer to the center of the vehicle. In addition, the new vehicle (4) is considerably shorter in length than the old snowmobile (1).

The present invention is shown in greater detail with its component parts commencing with Fig. 10. In Fig. 10, there is a unibody frame (10). The driver is on a seat (11) and is holding on the handle bars (13) of the steering column (12).

In Fig. 10, there is a shock absorber (14) of the front suspension. The ski leg (15) which is used for not only supporting the ski assembly (16) but also wheels (not shown in Fig. 10) is also shown. The engine (17) is placed on a cradle-type engine mount shown as (18). This is done during production. It is then with the use of pins or brackets or screws (21) affixed to the frame.

There are a pair of drive shafts (19) and (20). An endless belt or track (9) is held in place and revolves about the track rail (22). The track rail (22) is suspended using linkage (24) and a shock absorber (23). The track (9) circles around the rear idler wheel (25). The rear track cover (26) is pivotable up and down depending upon whether the rear suspension is in a compressed or extended state.

In Fig. 11 and 12 are perspective views of the unibody chassis or frame (10). A tunnel area (27) is shown with a curved arrow and indicates the area where the track (9) or chain (52) of the present invention travels.

In Fig. 13 some structural components have been added to the frame in the form of lateral side braces (28a and 28b). There is also a right front frame

member (30a) and a left front frame member (30b). Cross braces (29 and 33) strengthen the frame. A horizontal flange (32b) is shown which forms the basis of the foot well. A left lateral flange (31b) has also been attached. This upper metallic structure increases the torsional rigidity and the resistance to flex of the unibody.

In Fig. 14 unitary cast ski log (15) is used to provide attachment for wheels when the vehicle is used as an all terrain vehicle and skis when used as a snowmobile.

Fig. 15 shows various views of the lower front suspension support arms (34). There is in fact a lower left front suspension support arm (34b) and a lower right front suspension support arm (34a). Support arm anchors (35) are also shown.

In Fig. 16, further structural components are shown. There is a left front strut (36b) and a right front strut (36a) which connect to the frame at cross brace (29). These struts attach to front suspension cross brace (37) at either end. Each end of cross brace (37) is attached to a shock absorber (14).

The basic components of the front suspension are shown clearly in Fig. 17. There is a lower left suspension support arm (34b), a lower right suspension support arm (34a), an upper right suspension support arm (38a) and an upper left suspension support arm (38b). Bushings (41) are seen. A stabilizer bar (39) has been added and is adapted to slide and pivot by way of pivot blocks (40a and 40b). These blocks slide about the lower suspension arms (34a and 34b).

In Fig. 18 one views the front sub-assembly frame (42).

Fig. 19 shows the front suspension in a near complete condition.

The sub-frame (42) connects together the various support arms and also supports a steering gear box (44) which connects to a steering rod (43). The steering gears (44) are adapted to move by steering column (12).

Fig. 20 shows the front suspension in a near completed condition with the exception of the steering rod (43) which has not yet been connected. A crank shaft (45) is visible through an aperture in the side of the unibody frame (10).

Fig. 21 shows the chassis and suspension basically completed. Most of the suspension force is transferred by way of a pyramidal structure to a common point, i.e. at cross-bar (27).

The pyramidal structure of transmitted force from the suspension is more evident in Fig. 22. Again in Fig. 22 one sees the stabilizer bar sliding blocks (40a and 40b) which hold the ends of the stabilizer bar (39). The stabilizer bar sliding blocks move along lower suspension support arms (34b and 34a).

In Figs. 23A and 23B, the rear suspension, adapted for an all terrain vehicle is shown. In Fig. 23A the suspension is shown in the compressed position and in Fig. 23B it is in the extended position. There is a rear suspension support arm (46) attached to a rear axle (47). There is a first linkage (48), a second linkage (49) and a third rear suspension linkage (50). These are adapted to attach to a shock absorber (23). A front linkage (56) is also shown.

Figs. 24A and 24B show the rear suspension linkage adapted to a

chain drive. There is a driving sprocket (51), a chain (52), an upper idler sprocket (53) and a lower idler sprocket (54). The chain attaches around a driven sprocket (55) which connects to the rear axle for movement. In Fig. 24A the suspension is in the compressed position and in Fig. 24B it is in the extended position.

In Figs. 25A and 25B a similar type of rear suspension is shown. However, the linkage is somewhat different as it is equipped for use with a snowmobile having a track at the rear-end rather than wheels. Again, there is a support arm (46), the first linkage (48), the second linkage (49 and 50), and the front linkage (56). The shock absorber (23) is also present. One notes however, that the linkage (48) is attached at a different position on the lower part of the axle. This is necessary for the snowmobile track function. Again, Fig. 25A is a suspension in the compressed state and in Fig. 25B it is in the extended state.

In Figs. 26A and 26B, the suspension is adapted for a snowmobile. Again there are the three linkages (48, 49 and 50), the front linkage (56), and the shock absorber (23). There is also the rear idler wheel (25) as well as idler wheels (57, 58 and 59).

One notes that the idler wheels in Figs. 26a and 26b ride about the track rail (22). The rear idler wheel (25) is attached to rear idler lift arm (60) which is pivotally mounted to the unibody frame.

In Fig. 27, one views the rear snowmobile suspension in two positions, the extended and the compressed positions. One notes the rear idler lift arm (60) is attached to the snow cover or snow flap (26).

In Fig. 28, there is shown a removable rear body portion (61) which

is attached behind the driver's seat. This removable rear body portion is removed and replaced by a mud guard fender assembly (not shown) when the vehicle is used as an all terrain vehicle. In the event that a second seat is required for a passenger during snowmobile operation, seat (62) is placed in the same position as the removable rear body portion (61). Seat (62) has a foot rest (63) and a seat back (64).

In Figs. 29, 30, 31 and 32 the improved vehicle of the present invention is shown in photographs at various stages of completion. As seen in Fig. 30 and particularly TP01, the snowmobile and the all terrain vehicle are shown with an identical frame and chassis. The all terrain vehicle appears shorter simply because the rear seat has been removed. In Fig. 32 photograph TP5, one notes the mud guard has replaced the end portion of the snowmobile body.

THE EMBODIMENTS OF THE INVENTION FOR WHICH AN EXCLUSIVE
PROPERTY OF PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. An Improved recreational vehicle adapted for use on snow or bare ground; said vehicle being shorter in length than a prior art snowmobile; said vehicle being constructed such that an operator is positioned forwardly, and an engine is placed rearwardly such that in operation, said engine and said operator are located close to the midpoint of the vehicle.
2. A vehicle as claimed in claim 1 including a unibody rear chassis and an upper support structure, said rear chassis including a tunnel adapted to permit a chain drive or track move therethrough; said upper support structure including a plurality of frame members thereby providing additional strength to the vehicle for all terrain use.
3. A vehicle as claimed in claim 2 including a front suspension; said front suspension adapted for use with a pair of skis or a pair of wheels, said front suspension including a pair of ski legs adapted to be connected to said wheels or said skis.
4. A vehicle as claimed in claim 2 including a rear suspension; said rear suspension comprising a support arm, a plurality of linkages, and at least one (1) shock absorber; said suspension being adapted for use with a snowmobile track.

or a chain drive and a pair of wheels.

5. A vehicle as claimed in claim 2 including a removable rear end body portion; said rear end body portion being in operation removed for all terrain vehicle use and replaceable by a tender/mud guard assembly; said end body portion also replaceable with a rear seat assembly, when said vehicle is used as a snowmobile.

6. A vehicle as claimed in claim 1 including a removable engine mount cradle, said cradle adapted to be connected to said engine during assembly line operation and thereafter placed into said vehicle and fixedly attached thereto.

7. A vehicle as claimed in claim 1 further including a pivotal snow track guard cover; said cover being mounted to said vehicle when said vehicle is equipped with a snowmobile track.

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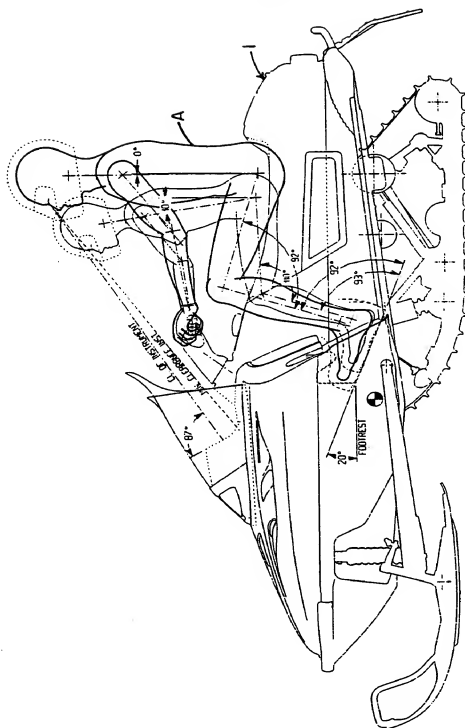


FIG. 1

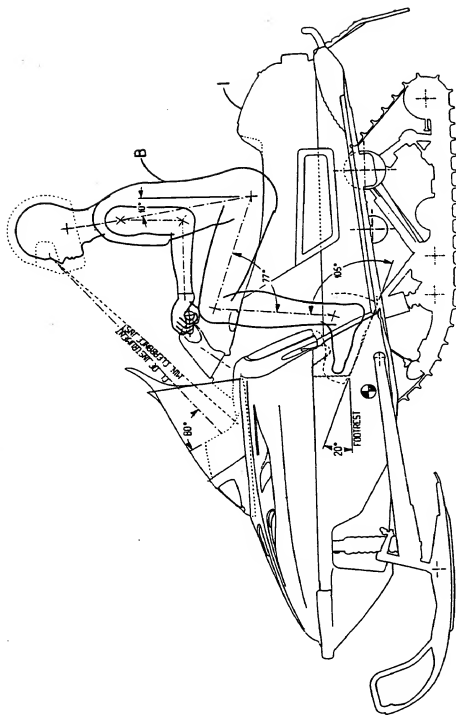


FIG. 2

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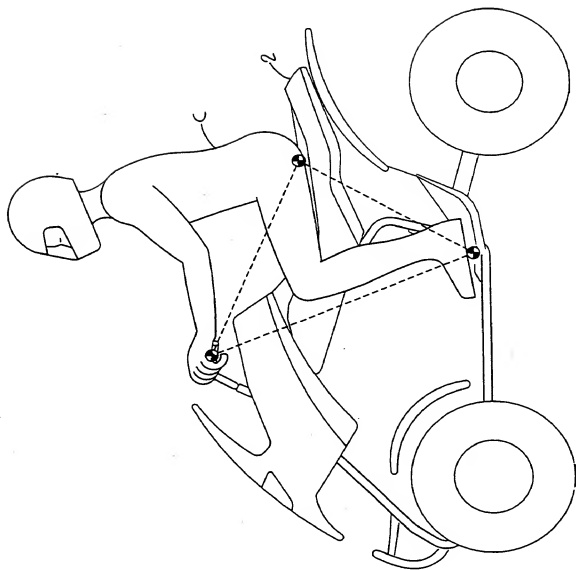


FIG. 3

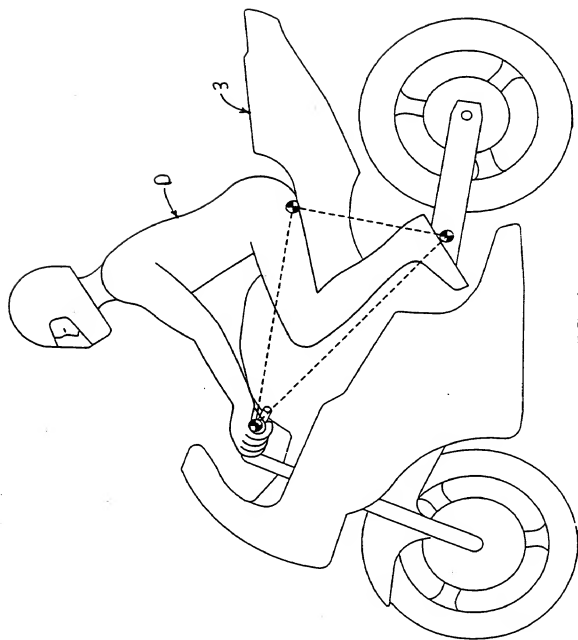


FIG. 4

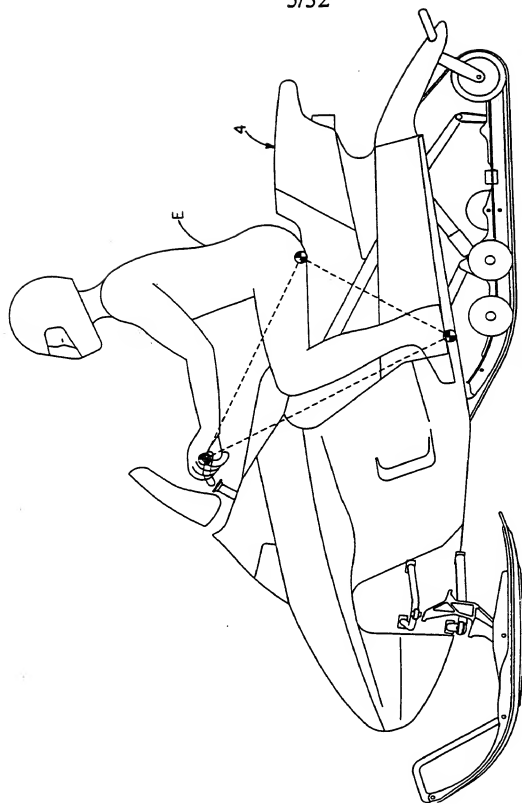


FIG. 5

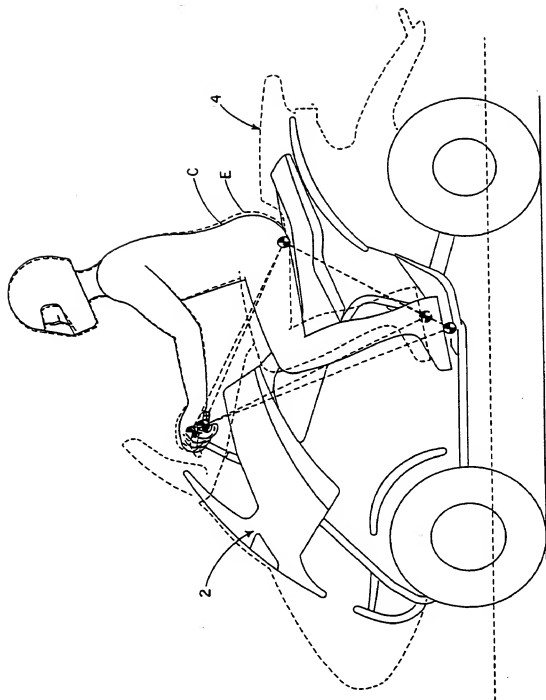


FIG. 6

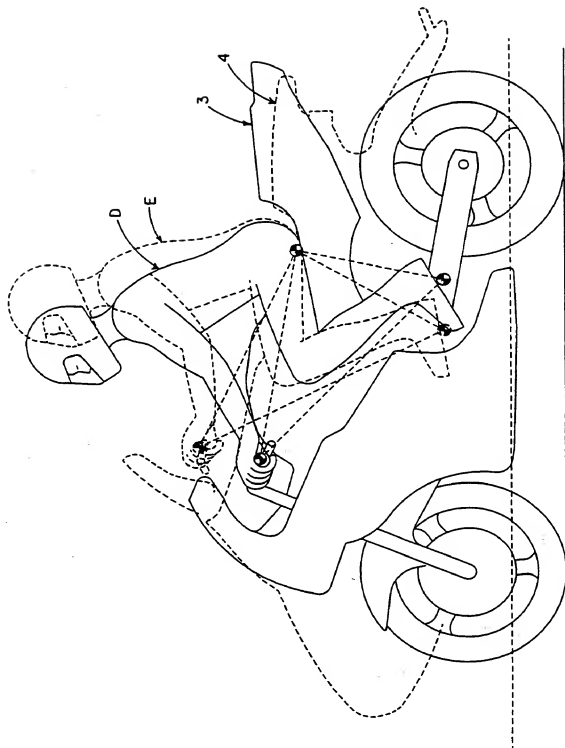


FIG. 7

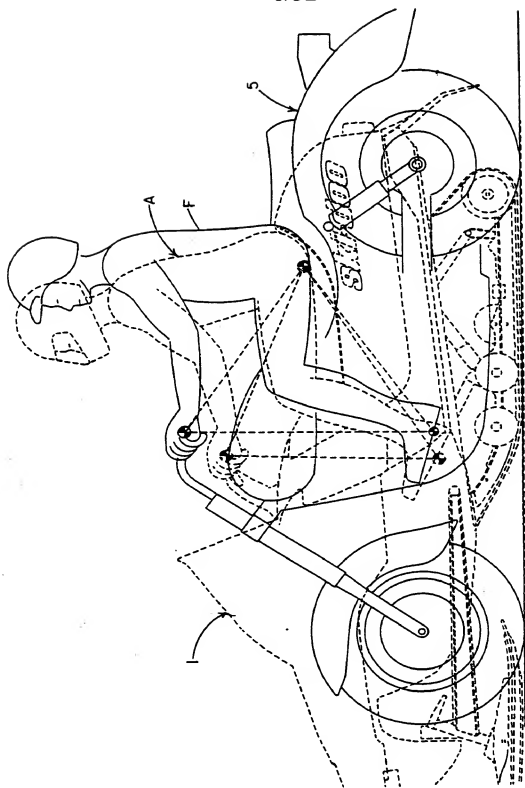


FIG. 8

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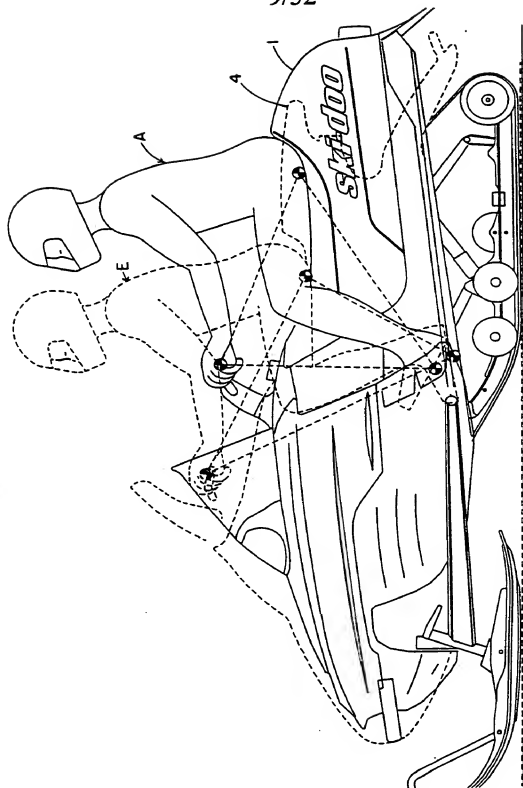


FIG. 9

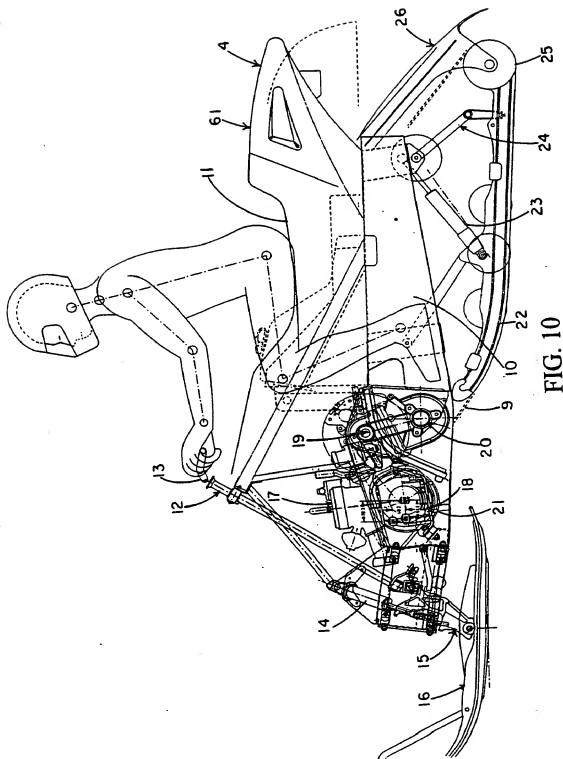


FIG. 10

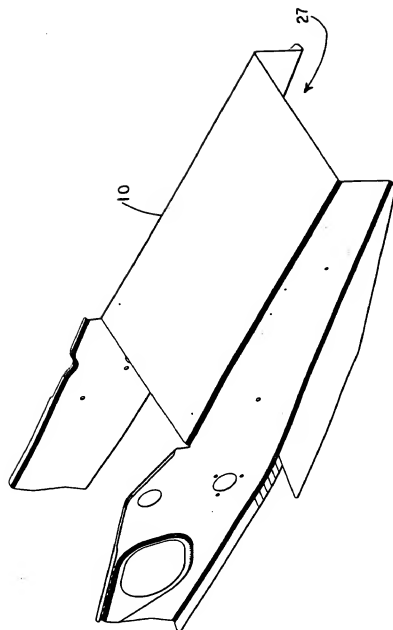


FIG. 11

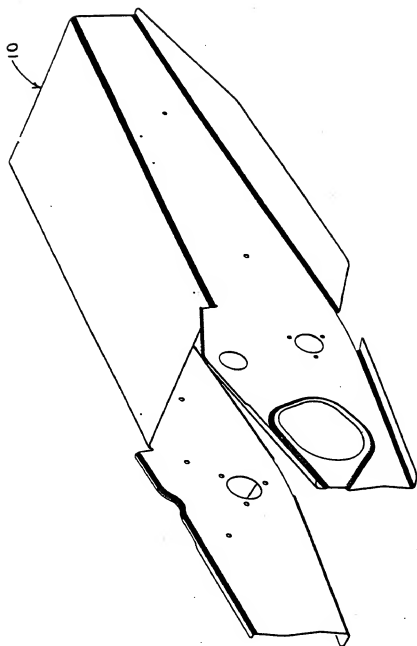


FIG. 12

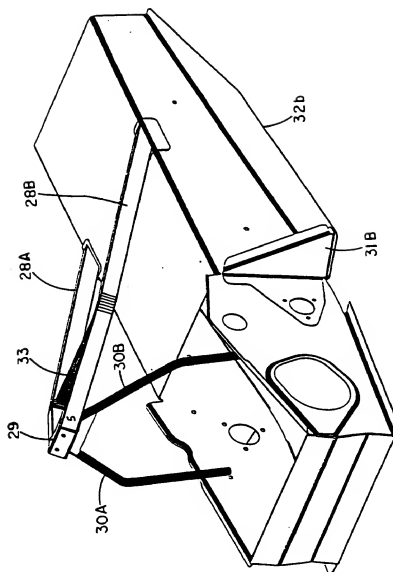


FIG. 13

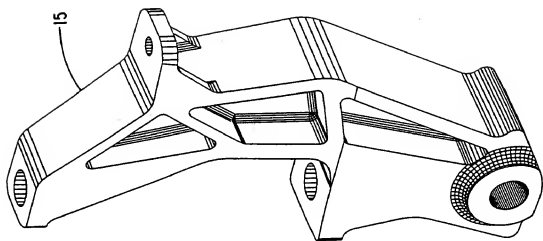


FIG. 14

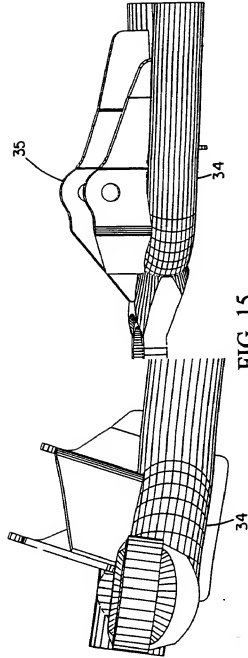
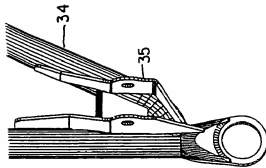
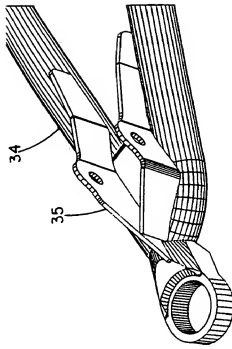


FIG. 15

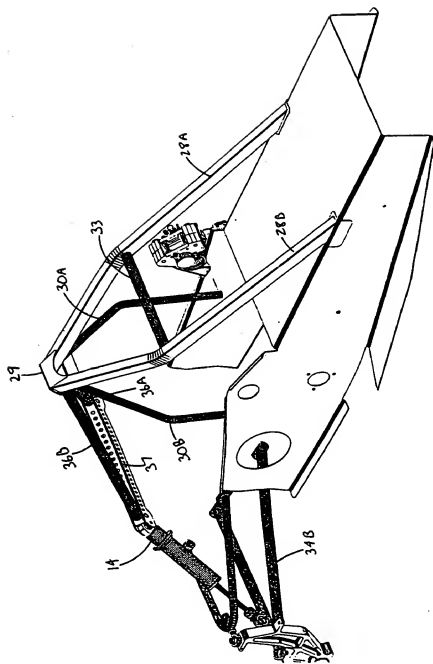
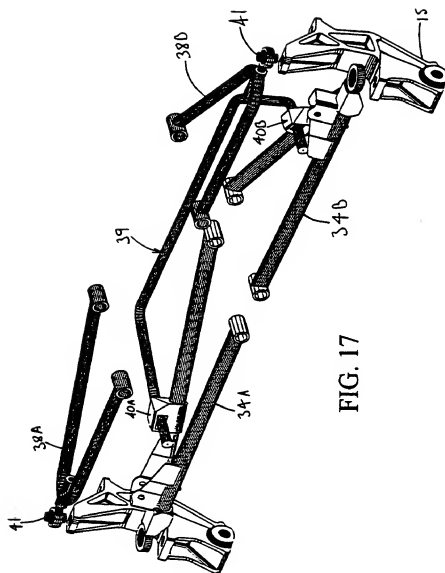


FIG. 16



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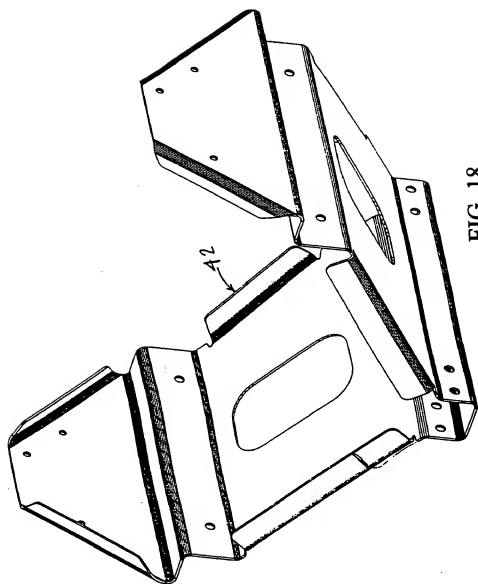


FIG. 18

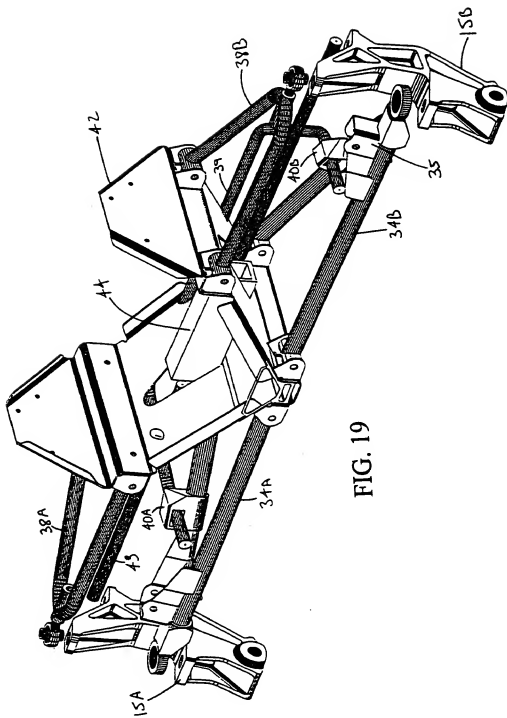
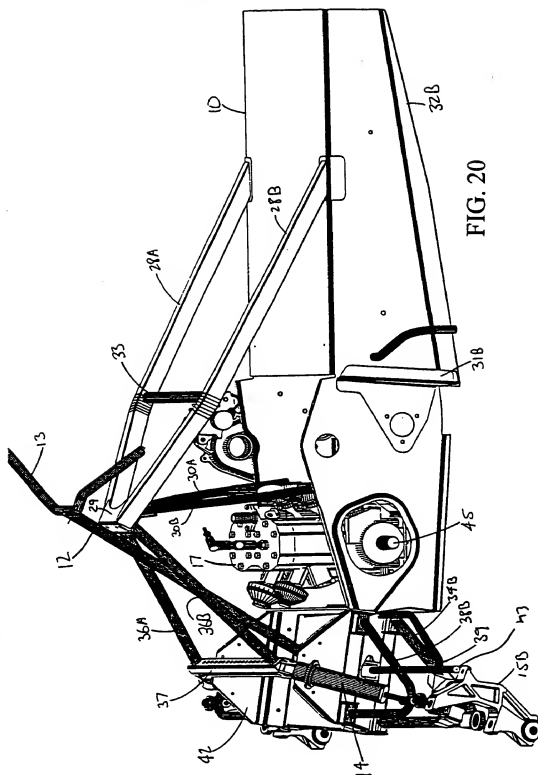


FIG. 19



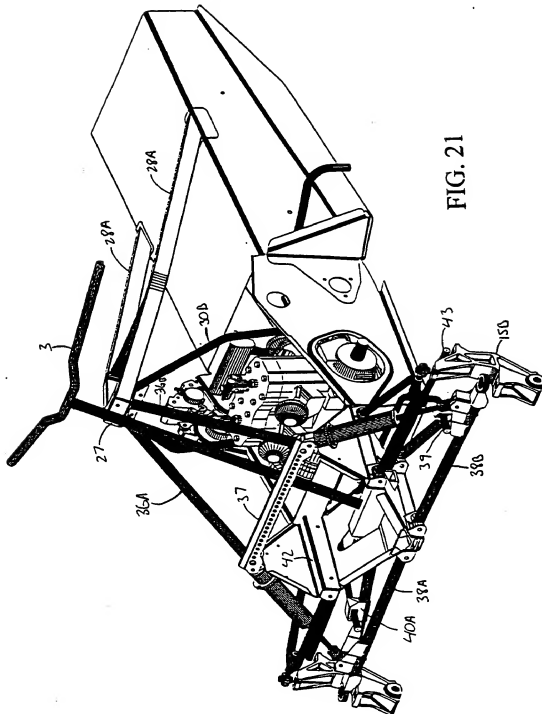
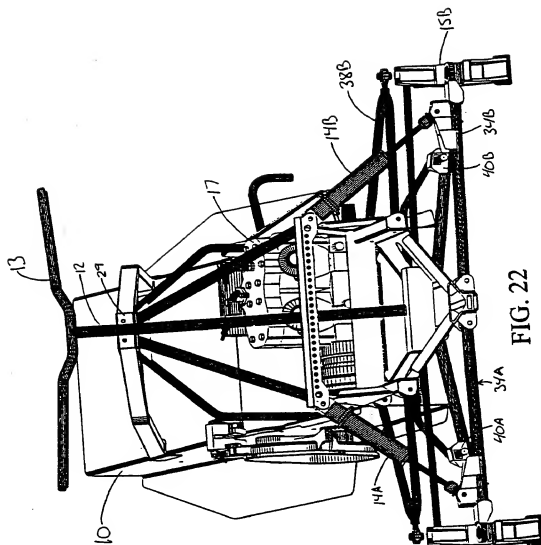
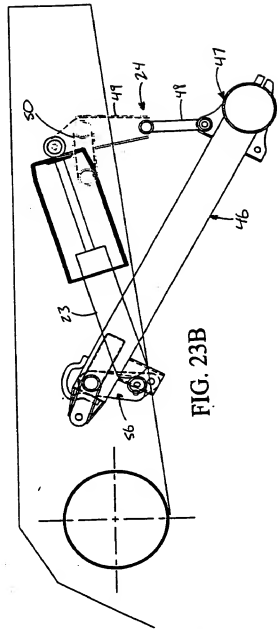
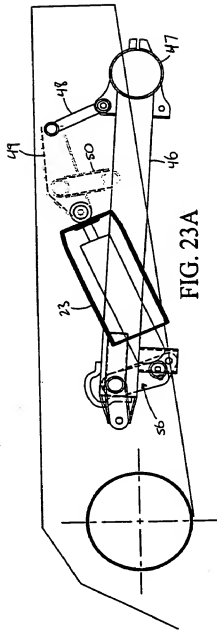
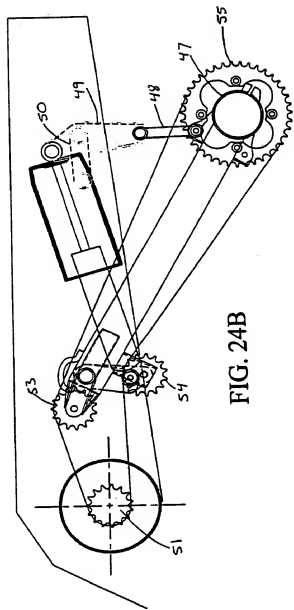
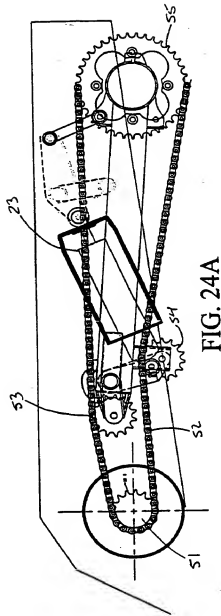
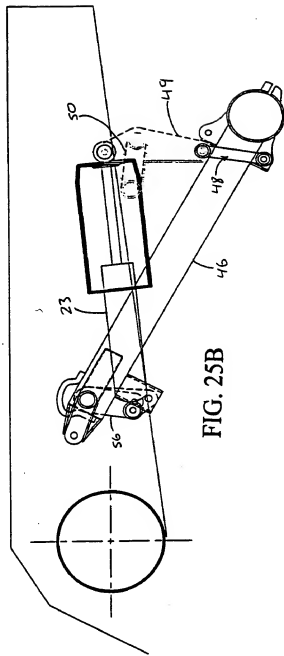
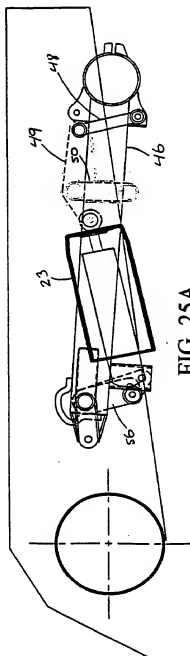


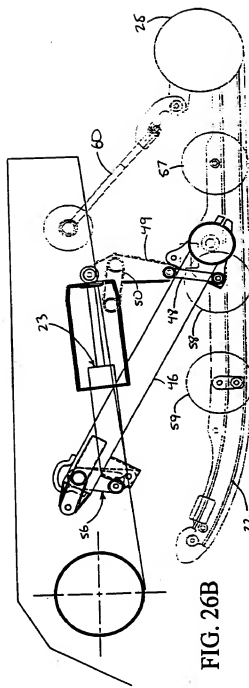
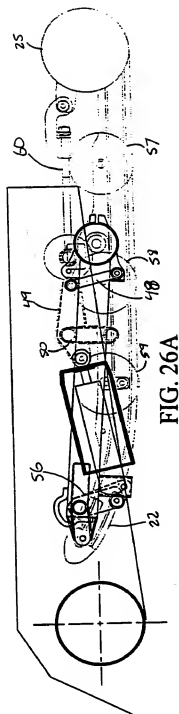
FIG. 21











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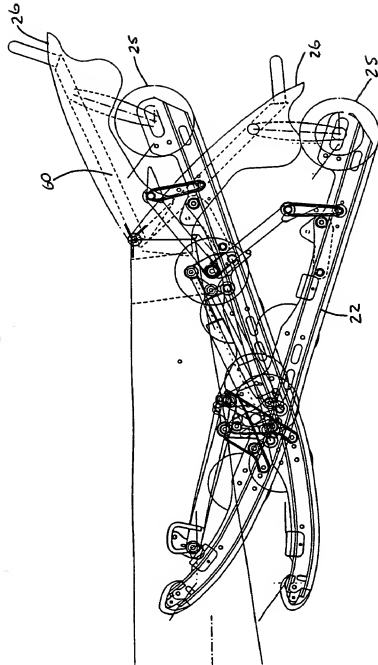


FIG. 27

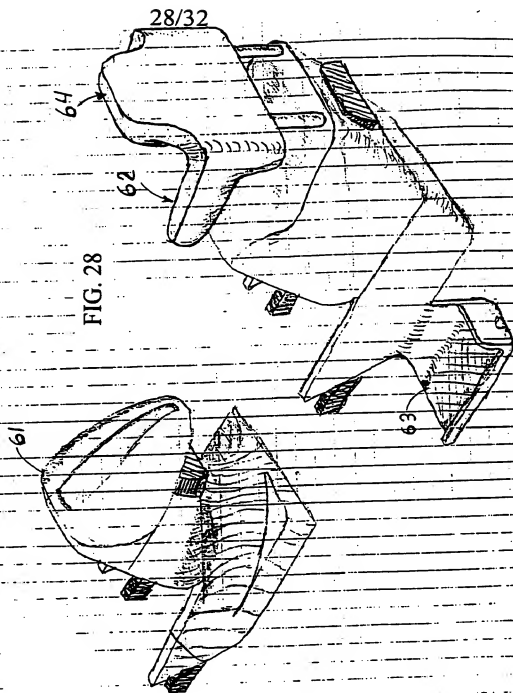


FIG. 28

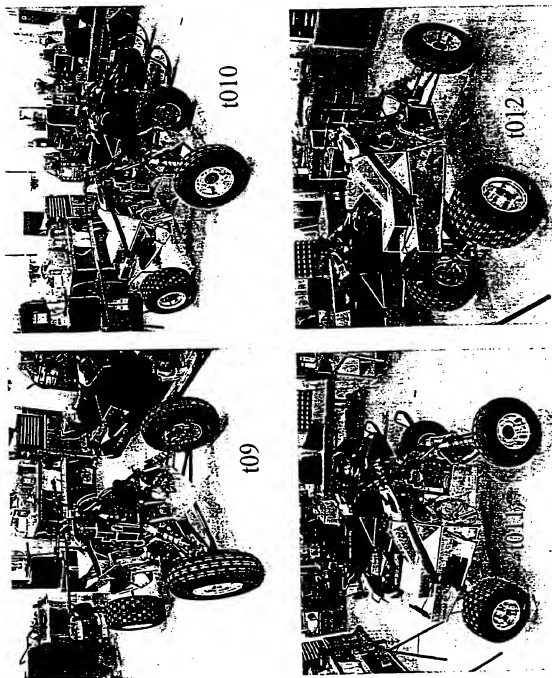


FIG. 29

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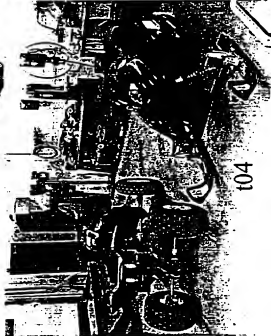
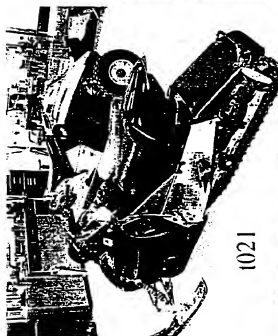
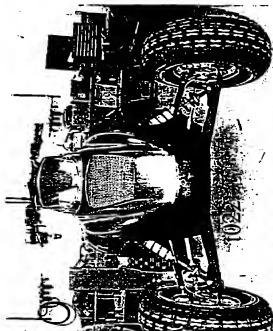


FIG. 30

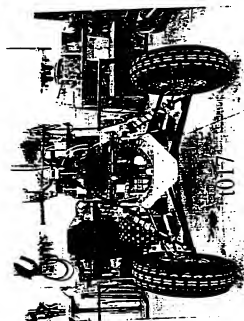
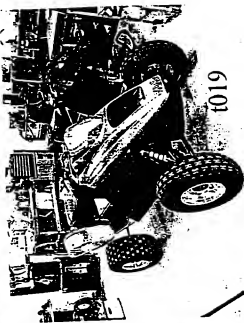
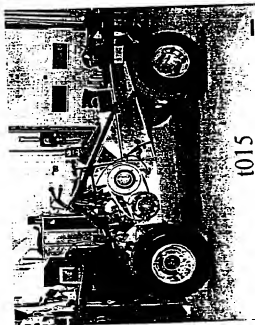
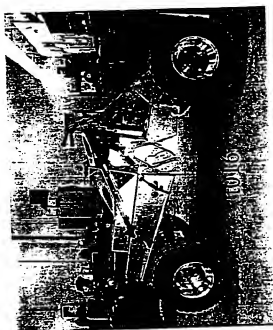


FIG. 31

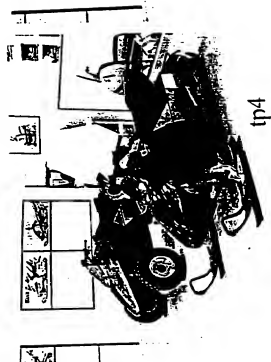
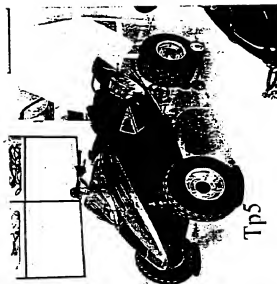


FIG. 32



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Washington, D.C. 20531
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/472,134	12/23/1999	BRUNO GIROUARD	PM-265136	8367

909 7590 03/14/2003
PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102*Applicant Brief Due
April 14, 2003*

EXAMINER	
BOEHLER, ANNE MARIE M	
ART UNIT	PAPER NUMBER

3611

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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PILLSBURY WINTHROP LLP/VA

MAR 17 2003

CL 086169 MT# 0265136
ATTY(S) 302 PTA
DUE: 4-14-03
DKT BY (1) LLS (2) _____

Advisory Action

Application No.

09/472,134

Applicant(s)

GIROUARD ET AL.

Examiner

Anne Marie M. Boehler

Art Unit

3611

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on 25 November 2002. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
(a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ they raise the issue of new matter (see Note below);
(c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet

3. ☐ Applicant's reply has overcome the following rejection(s): ____
4. ☐ Newly proposed or amended claim(s) ____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: ____

Claim(s) objected to: ____

Claim(s) rejected: 1-49, 55, 58-61, 64-68, 73 and 76-92

Claim(s) withdrawn from consideration: ____

8. ☒ The proposed drawing correction filed on 14 February 2003 is a) ☐ approved or b) ☒ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). ____

10. ☐ Other: ____

AmBull 3/13/03

Anne Marie M. Boehler
Primary Examiner
Art Unit: 3611

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF

Confirmation No.: 8367

GIROUARD et al.

Group Art Unit: 3618

Appln. No.: 09/472,134

Examiner: Anne Marie Boehler

Filed: December 23, 1999

Title: SNOWMOBILE

February 14, 2003

* * * * *

REQUEST FOR APPROVAL OF DRAWING CORRECTIONS

Hon. Commissioner of Patents
Washington, D.C. 20231

Sir:

Applicants submit herewith proposed corrections in red to Figs. 2 and 3. Approval of the proposed changes is respectfully requested.

Respectfully submitted,

Pillsbury Winthrop LLP

By: 

Paul T. Bowen

Registration No.: 38,009

Tel. No.: (703) 905-2020

Fax No.: (703) 905-2500

PTB

Enclosures:

Figs. 2 and 3

1600 Tysons Boulevard
McLean, VA 22102
(703) 905-2000

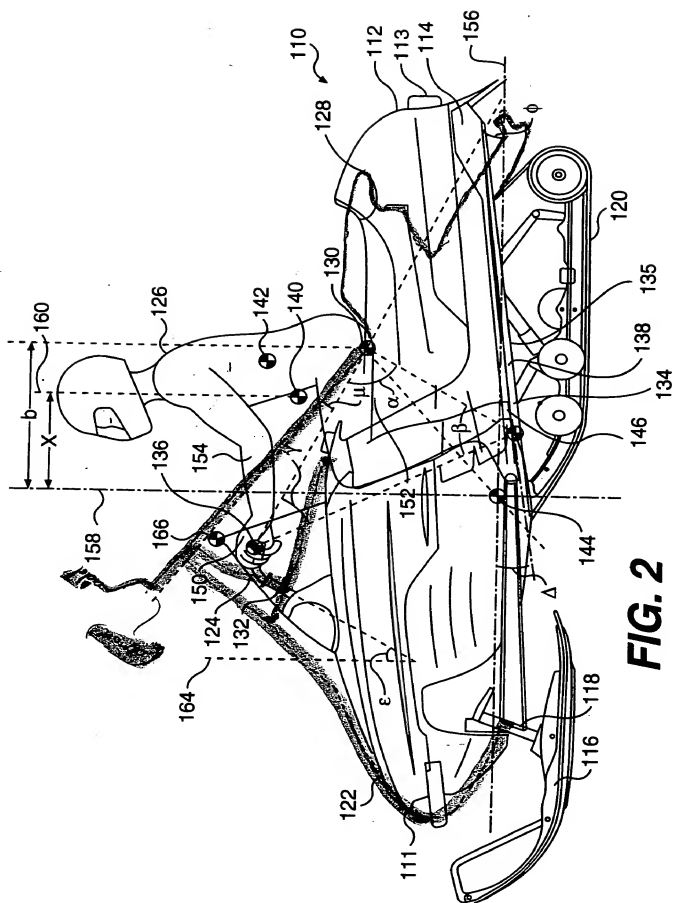
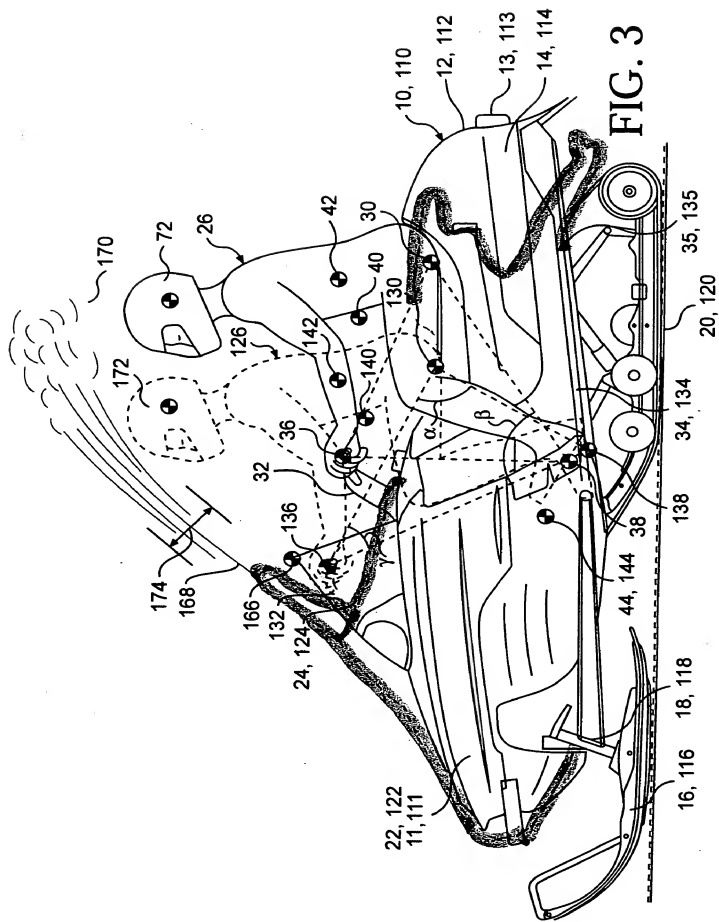


FIG. 2





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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/472,134	12/23/1999	BRUNO GIROUARD	PM-265136	8367

909 7590 11/14/2002
PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER	
BOEHLER, ANNE MARIE M	
ART UNIT	PAPER NUMBER

3611

DATE MAILED: 11/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED
PILLSBURY WINTHROP LLP/VA

NOV 19 2002

CL 9919 MT# 265136
ATTY# JNK PTO
DUE 2-14-03
DRI BY (1) dm (2) MD

Office Action Summary

Application No.

09/472,134

Applicant(s)

GIROUARD ET AL.

Examiner

Anne Marie M. Boehler

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on May 22 and July 9, 2002.

2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☐ Claim(s) 1-49, 55, 58-61, 64-68, 73 and 76-92 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) 1-49, 55, 58-61, 64-68, 73, 76-92 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

1. The corrected or substitute drawings were received on May 22, 2002. These drawings are not approved by the examiner because they contain new matter. The windshield configuration, in particular, is not supported by the original disclosure. These changes do not make the drawings more consistent with modified Figure 4, as indicated in applicant's remarks, and they significantly alter the position of the windshield, including the position of the windshield top edge relative to the steering member (the angle formed between the windshield, seat position, and steering member, recited on pages 13 and 14), which is a claimed feature of applicant's invention and which is described in applicant's detailed disclosure.
2. Claims 1-49, 55, 57-61, 64-68, 73, and 76-92 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant fails to show an operative embodiment of the invention. The only drawings of applicant's invention are Figures 2 and 3, which show the snowmobile with a rider in the prior art position and in the position he would assume if riding on applicant's snowmobile. The main difference between the two snowmobiles (the prior art one and that of the applicants) is the position of the handlebars. However, the positioning of the handlebars in Figures 2 and 3 would not allow any significant steering of the vehicle. Therefore, applicant's invention, as disclosed, is inoperative.

The embodiment of figures 2 and 3 is the only disclosed embodiment. By showing the prior art configuration and that of applicant's invention superimposed on

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF

GIROUARD et al.

Appln. No.: 09/472,134

Filed: December 23, 1999

Title: SNOWMOBILE

Confirmation No.: Unknown

Group Art Unit: 3618

Examiner: Anne Marie Boehler

May 22, 2002

* * * * *


REQUEST FOR APPROVAL OF DRAWING CORRECTIONS

Hon. Commissioner of Patents
Washington, D.C. 20231

Sir:

Authorization is hereby requested to amend Figures 2 and 3 as indicated in red on the attached sheet. Approval of this change is respectfully requested.

Respectfully submitted,
Pillsbury Winthrop LLP

By: 
Paul T. Bowen
Reg. No.: 38,009
Tel. No.: (703) 905-2020
Fax No.: (703) 905-2500

PTB/jck
Attachment:
Figures 2 and 3

Post Office Box 10500
McLean, VA 22102
(703) 905-2000

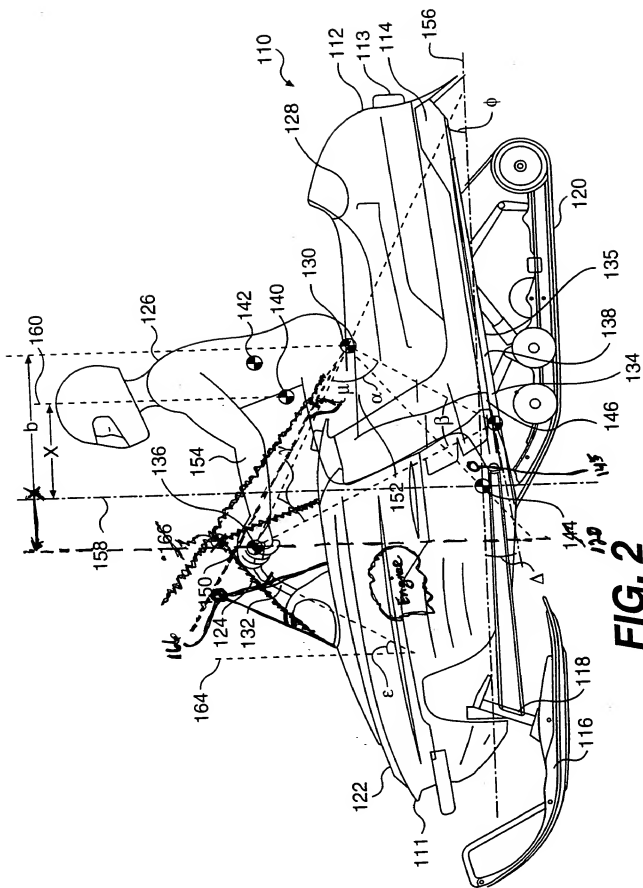
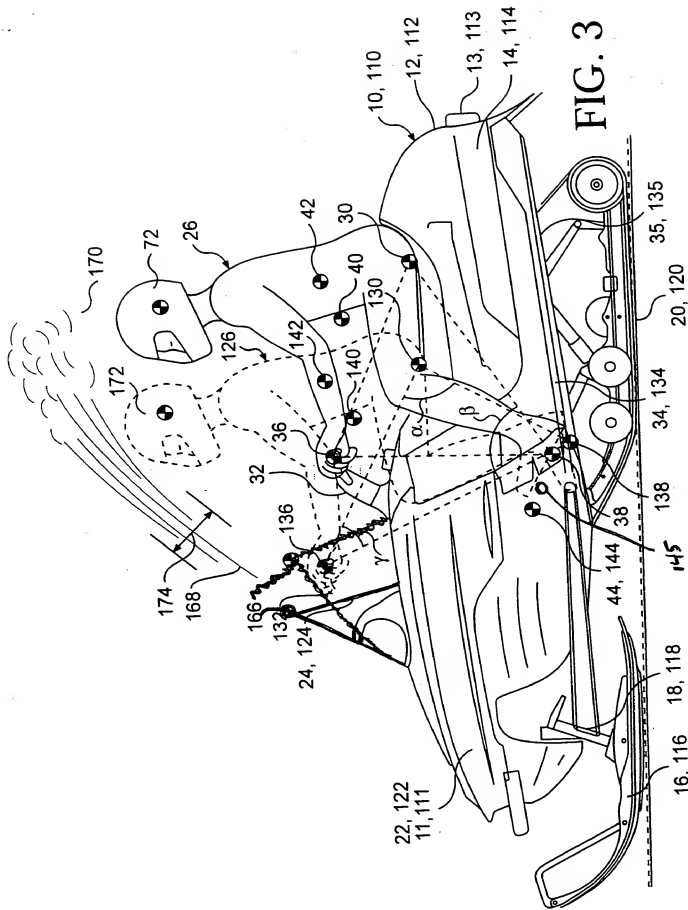


FIG. 2





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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/472,134	12/23/1999	BRUNO GIROUARD	PM-265136	8367

7590 01/22/2002
PILLSBURY MADISON AND SUTRO LLP
INTELLECTUAL PROPERTY GROUP
NINTH FLOOR
1100 NEW YORK AVENUE NW
WASHINGTON, DC 200053918

EXAMINER	
BOEHLER, ANNE MARIE M	
ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 01/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED
PILLSBURY WINTHROP LLP/VA

FEB 20 2002

CL 9919 MT# 265136
ATTY(S) 7DR PTA
DUE: 4-22-02
DKT BY (1) DM (2) JCH

Office Action Summary

Application No.
08/472,134

Applicant(s)

Girouard et al.

Examiner

Anne Marie Boehler

Art Unit

3618

The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

aftered for Reply
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may result in a deemed patent term adjustment. See 37 CFR 1.704(b).

Status
1) ☒ Responsive to communication(s) filed on September 24 and October 26, 2001

- 2a) ☐ This action is FINAL.
2b) ☒ This action is non-final.

- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49, 55, 57-61, 64-68, 73, and 76-84 is/are pending in the application.
4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-49, 55, 57-61, 64-68, 73, and 76-84 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. 9919 NT# 265136
3. ☐ Copies of the certified copies of the priority documents have been received in ATM/US National Stage 70R P78
_____ DUE: 4-22-02
_____ DKT BY (1) Dsw (2) 4-19

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-848)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper Filed. _____
18) ☐ Interview Summary (PTO-413) Paper Filed. _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: _____

Office Action Summary

Part of Paper No. 22

RECEIVED
PILLSBURY WINTHROP LLP/NA

FEB 20 2002

Application/Control Number: 09/472,134

Art Unit: 3611

1. Proposed drawing changes have been approved, however, even as amended, the drawings do not show the handlebars in a position which would allow any substantial amount of movement, as would be required to steer the vehicle.
2. Claims 1-49, 55, 57-61, 64-68, 73, 76-84 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant fails to show an operative embodiment of the invention. The only drawings of applicant's invention are Figures 2 and 3, which show the snowmobile with a rider in the prior art position and in the position he would assume if riding on applicant's snowmobile. The difference between the two snowmobiles (the prior art one and that of applicant) is the position of the handlebars. However, the positioning of the handlebar in Figures 2 and 3 would not allow any significant steering of the vehicle. Therefore, applicant's invention, as disclosed, is inoperative.

3. Claims 1-49, 55, 57, 58, 61, 64-68, 73, and 76-84 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Applicant improperly defines his invention with respect to a rider's body. In many of the claims (for example, claims 1-39 and 61), applicant defines the invention with respect to the rider's center of gravity. However, the rider himself (and his body parts and center of gravity) are not statutory subject matter that may define a patentable claim. Also, every rider is different, even

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF

GIROUARD et al.

Appln. No.: 09/472,134

Filed: December 23, 1999

Title: SNOWMOBILE

Confirmation No.: Unknown

Group Art Unit: 3618

Examiner: Anne Marie Boehler

September 24, 2001

* * * * *

REQUEST FOR APPROVAL OF DRAWING CORRECTIONS

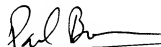
Hon. Commissioner of Patents
Washington, D.C. 20231

Sir:

Applicants submit herewith proposed corrections in red to Figs. 4 and 20. Approval of the proposed changes is respectfully requested.

Respectfully submitted,
Pillsbury Winthrop LLP

By:



Paul T. Bowen
Registration No.: 38,009
Tel. No.: (703) 905-2020
Fax No.: (703) 905-2500

PTB/jck

Enclosures:

Figs. 4 and 20

1600 Tysons Boulevard
McLean, VA 22102
(703) 905-2000

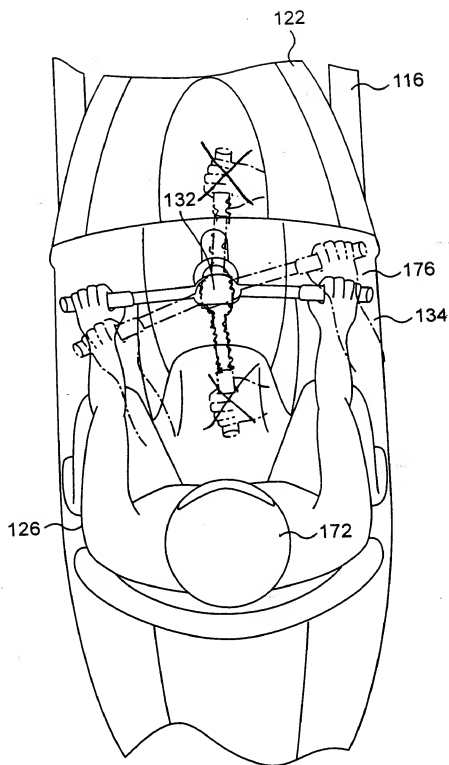


FIG. 4

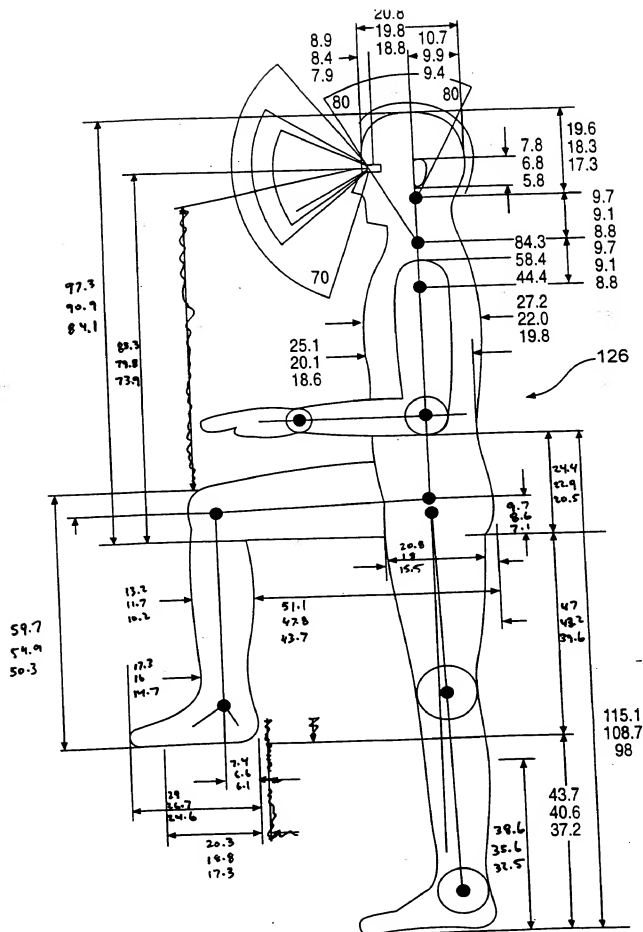


FIG. 20



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SK

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/472,134 12/23/99 GIROUARD

PM-265136

EXAMINER

PM92/0126

PILLSBURY MADISON AND SUTRO LLP
INTELLECTUAL PROPERTY GROUP
NINTH FLOOR
7100 NEW YORK AVENUE NW
WASHINGTON DC 20005-3918

NOTE of Appeal
As 2-12-01

ART UNIT	PAPER NUMBER
----------	--------------

3618
DATE MAILED:

01/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

PILLSBURY WINTHROP
RECEIVED
JAN 30 2001
REGISTERED
WASHINGTON, DC

Advisory Action

Application No.
09/472,134

Applicant(s)

Girouard et al.

Examiner

Anne Marie Boehler

Group Art Unit
3618

THE PERIOD FOR RESPONSE: (check only a) or b)

a) ☒ expires 4 months from the mailing date of the final rejection.

b) ☐ expires either three months from the mailing date of the final rejection, or on the mailing date of this Advisory Action, whichever is later. In no event, however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

☐ Appellant's Brief is due two months from the date of the Notice of Appeal filed on _____ (or within any period for response set forth above, whichever is later). See 37 CFR 1.191(d) and 37 CFR 1.192(a).

Applicant's response to the final rejection, filed on Jan 12, 2001 has been considered with the following effect, but is **NOT** deemed to place the application in condition for allowance:

☒ The proposed amendment(s):

☐ will be entered upon filing of a Notice of Appeal and an Appeal Brief.

☒ will not be entered because:

☒ they raise new issues that would require further consideration and/or search. (See note below).

☐ they raise the issue of new matter. (See note below).

☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.

☐ they present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE: Recitation of a "standard position" of the standard rider is a new issue requiring further consideration and search.

☒ Applicant's response has overcome the following rejection(s):

The rejection of claims 59-61 based on the combination of Husted and Boyer.

☐ Newly proposed or amended claims _____ would be allowable if submitted in a separate, timely filed amendment cancelling the non-allowable claims.

☒ The affidavit, exhibit or request for reconsideration has been considered but does NOT place the application in condition for allowance because:
applicant improperly defines the invention based on the positioning of the rider on the vehicle rather than by claiming the vehicle structure itself.

☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

☒ For purposes of Appeal, the status of the claims is as follows (see attached written explanation, if any):

Claims allowed: _____

Claims objected to: _____

Claims rejected: 1-83

☒ The proposed drawing correction filed on Jan 12, 2001 ☒ has ☐ has not been approved by the Examiner.

☐ Note the attached Information Disclosure Statement(s), PTO-1449, Paper No(s).

☐ Other

ANB
ANNE MARIE BOEHLER
Primary Examiner

703-308-0422

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

GIROUARD, Bruno et al.

Appln. No. 09/472,134

Filed: December 23, 1999

Title: SNOWMOBILE

Group Art Unit: 3618

Examiner: Boehler, A.

* * * * *

January 12, 2001

REQUEST FOR APPROVAL OF DRAWING CORRECTIONS
FOR FIGURES 1, 2, 3 AND 14

Hon. Commissioner of Patents
Washington, D.C. 20231

Sir:

Attached are copies of Figs. 1, 2, 3, and 14 showing proposed drawing changes in red.
Approval of these changes is respectfully requested.

Respectfully submitted,

INTELLECTUAL PROPERTY GROUP OF
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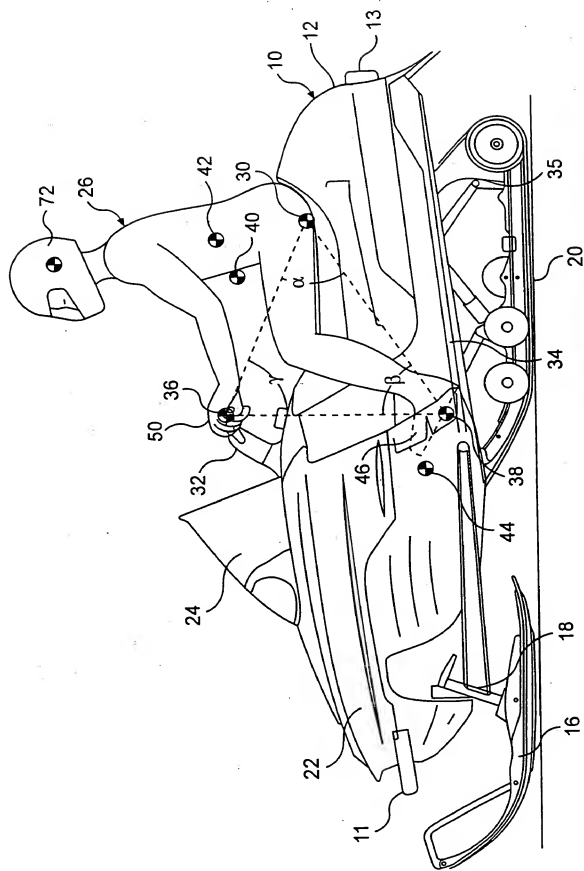
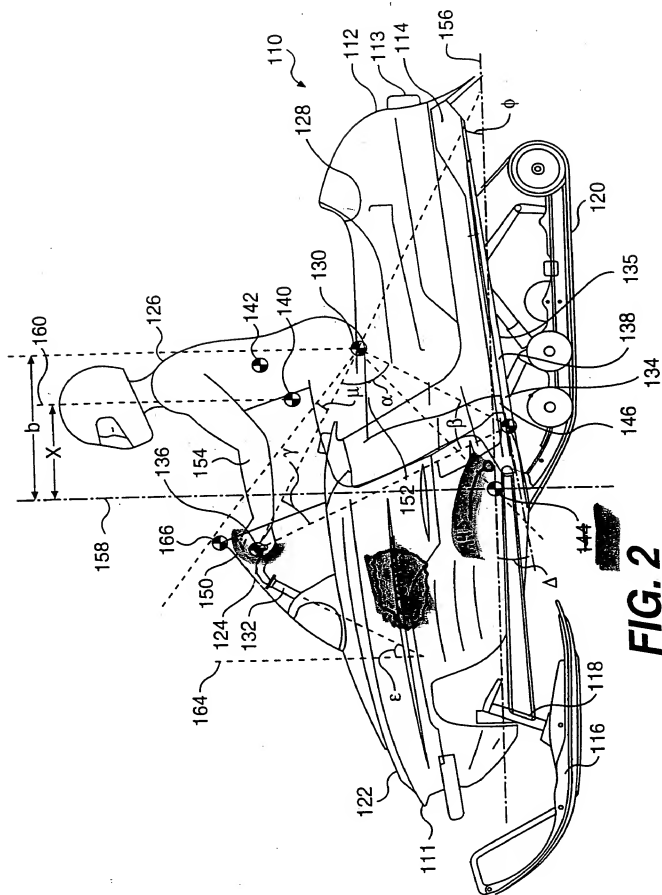


FIG. 1



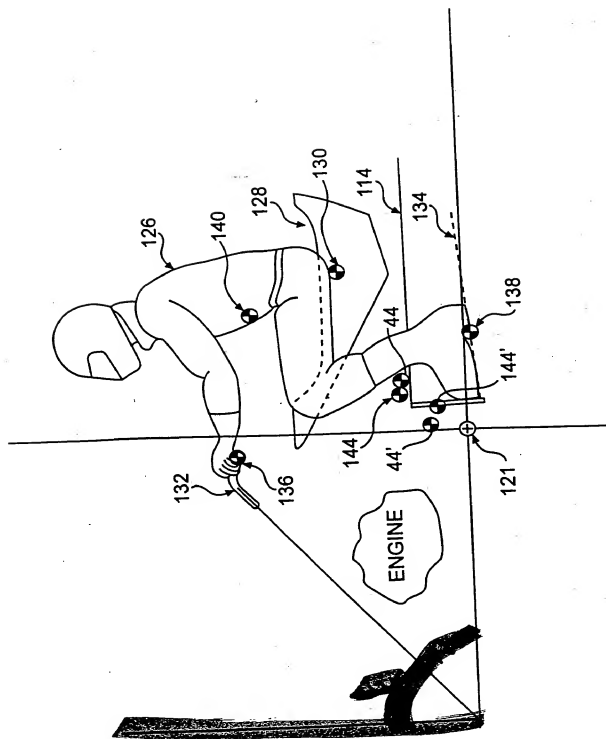


FIG. 14

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